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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.        | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------------|------------------|
| 10/521,098  | 05/11/2005  | Hannoch Ron          | 91250JLT                   | 6474             |
| 1333 7590 02/13/2007<br>PATENT LEGAL STAFF<br>EASTMAN KODAK COMPANY<br>343 STATE STREET<br>ROCHESTER, NY 14650-2201 |             |                      | EXAMINER<br>ZIMMER, MARC S |                  |
|   |             |                      | ART UNIT<br>1712           | PAPER NUMBER     |
| SHORTENED STATUTORY PERIOD OF RESPONSE  |             | MAIL DATE            | DELIVERY MODE              |                  |
| 3 MONTHS  |             | 02/13/2007           | PAPER                      |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/521,098

Applicant(s)

RON ET AL.

Examiner

Marc S. Zimmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 53-79 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 53-79 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/31/05</u> . | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 53-79 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

At issue is Applicants' characterization of one element of their invention as a, "single coat self-organized multilayer" in claim 53. First, the Examiner believes that claim 26 should expound on the meaning of the phrase "self-organized", i.e. by clarifying the mechanism by which the layer organizes itself. The Specification does not in any one passage provide a concise explanation of this concept and a full understanding is only achieved by a fairly thorough review of the disclosure that one comes to appreciate that "self organized" alludes to the graduated separation of two immiscible polymer materials. Additionally, the Examiner believes that to characterize the layer as a "multilayer" is imprecise and unintentionally misleading because, in fact, the so-called multilayer is actually a single layer having a compositional gradient wherein the relative amounts of two immiscible polymers is continuously changing in the thickness direction of the layer. Therefore, the Examiner strongly advocates amending claim 53 in a manner consistent with the language of the abstract or, alternatively, the Specification at lines 15-17. The language employed in claim 79 might also be adopted. The claim below is offered by way of example:

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53. A lithographic printing plate comprising: a substrate; and an infrared-imageable, self-organized layer wherein the self-organized layer features a *continuous varying distribution* of an hydrophilic/oleophilic, dye-receptive polymer material and an hydrophobic/oleophobic dye-repelling polymer material, the distribution being induced by the incompatibility of said materials.

It is then submitted that Applicant could amend the remainder of the claims using language consistent with proposed claim 53. For example, claim 58 could be re-written as:

58. The lithographic printing plate of claim 58 wherein said hydrophobic/oleophobic dye-repelling polymer material comprises a silicone polymer and the hydrophilic/oleophilic, dye-receptive polymer material comprises a non-silicone polymer.

The method claims could be amended in a similar fashion. Of course, Applicant does not have to use exactly the language that the Examiner has proposed but the invention must be re-defined in a fashion that enhances the practitioner's understanding of what is being claimed.

Ostensibly, any attempt to resolve the matter outlined *supra* would also result in claims 75 and 76 being amended. Nevertheless, the following problems with these claims are noted. There is no antecedent basis in claim 74 for the non-silicone polymer recited in

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claim 75. Claim 76 is confusing because the dilution step presumably occurs before the application step (during the actual preparation of the coating composition) but, when read in the context of incorporating all of the limitations of claims 65, 73, 74, and 75, the claim becomes quite convoluted. Applicant might consider incorporating the composition preparation steps into claim 65. At the very least claim 76 should be amended to state as follows:

76. The method of claim 74 wherein the solvent mixture selected is one that permits the ingredients to remain in solution for at least 8 hours.

As the skilled artisan is aware, driographic printing plates most often comprise an ink repellant layer overlaid on an imaging layer that is, in turn, applied on a substrate. It is typical that the ink repellant layer is a polyorganosiloxane. See, for instance, U.S. Patent Nos. 5,704,291, 5,871,883 and 5,353,705, U.S. Patent Application Publication No. 2002/0146634, WO 94/01280, DE 2512038, and JP 50-053107. In at least some of these disclosures, the layers comprise the same polymer materials, i.e. a polyorganosiloxane and nitrocellulose, as are favored by Applicant. However, none of these references (nor any of the others teaching a waterless printing plate featuring an organosilicon coating) describe a layer derived from a mixture of incompatible polymers that provide a compositional gradient in the thickness direction of the layer.

JP 62-134289 is of some interest because it actually teaches a layer comprising a silicone resin and a second incompatible polymer. There is, however, no indication

that a layer having a continuous compositional gradient is provided in this case. It should be emphasized that the specific outcome contemplated by Applicants' disclosure is realized only in part due to their employment of immiscible materials. The approach by which these materials are combined is as important as the materials themselves. An alternative outcome would be one in which the second polymer formed an island-in-sea structure in the layer taught by the reference. In any case, the Examiner has submitted a request for a full written translation of this document to ascertain whether this document is particularly germane to the claimed invention.

Goss et al., EP 456 336 A2 also discloses a printing plate comprising a layer of polymer materials that are immiscible with each other. Unlike the aforementioned Japanese document, this disclosure is clear that an island-in-sea orientation of the polymer materials is acquired.

Notsu et al, U.S. patent # 6,030,712 teaches a printing plate comprising a photosensitive layer comprising nitrocellulose, carbon black (which converts light energy into heat), an organic binder and, in one embodiment, a silicone crosslinker. There is nothing in that disclosure that would suggest that a compositionally-graduated layer is formed. Indeed, the silicone could not fulfill its intended role as a crosslinker if it was largely separated from nitrocellulose-enriched regions of the layer.

Lewis, U.S. Patent # 6,207,349 is of interest only because it describes a graded structure comprising multiple layers of a polymer matrix filled with inorganic particles wherein the layers are introduced in a stepwise fashion and the inorganic particle content increases with each layer more distant from the substrate.

***Allowable Subject Matter***


Claims 53-79 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

February 13, 2007

  
MARC S. ZIMMER  
PRIMARY EXAMINER